

IN THE CLAIMS

Please amend the claims as indicated below.

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1. (currently amended) A shaped contoured structural member, comprising:
- an inner section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material;
- an outer section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material; and
- at least one intermediate layer having a ribbed structure connecting the inner section and the outer section.
2. (original) The structural member of claim 1, wherein the structural member has a substantially non-straight configuration.
3. (currently amended) The structural member of claim 1, wherein the ~~plurality of the layers in the~~ inner section contains both a layer of a composite material and a layer of a metal-containing material.
4. (currently amended) The structural member of claim 1, wherein the ~~plurality of the layers in the~~ outer section contains both a layer of a composite material and a layer of a metal-containing material.
5. (previously amended)) The structural member of claim 2, wherein the metal-containing material is a metal alloy.
6. (original) The structural member of claim 1, further comprising at least one initiator.
7. (currently amended) A substantially non-straight structural member, comprising:

an inner section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material;

an outer section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material; and

at least one intermediate layer having a ribbed structure connecting the inner section and the outer section.

8. (currently amended) The structural member of claim 7, wherein the ~~plurality of the layers in~~ the inner section contains both a layer of a composite material and a layer of a metal-containing material.

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9. (currently amended) The structural member of claim 7, wherein the ~~plurality of the layers in the~~ inner section contains both a layer of a composite material and a layer of a metal-containing material.

10. (previously amended) The structural member of claim 7, wherein the metal-containing material is a metal alloy.

11. (original) The structural member of claim 7, further comprising at least one initiator.

12. (original) The structural member of claim 1, wherein the composite material is a reinforced resin matrix material.

13. (original) The structural member of claim 7, wherein the composite material is a reinforced resin matrix material.

14. (currently amended) The structural member of claim 1 or 7, wherein both the ~~at least one inner layer~~ section and the ~~at least one outer layer~~ section comprise a composite material.

15. (currently amended) The structural member of claim 1 or 7, wherein both the ~~at least one~~ inner layer section and the ~~at least one~~ outer layer section comprise a metal-containing material.

16. (currently amended) The structural member of claim 1 or 7, wherein the ~~at least one inner layer comprises a composite material and the at least one outer layer comprises a metal-containing material~~ the ribbed structure comprises a honeycomb core.

17. (currently amended) The structural member of claim 1 or 7, ~~wherein the at least one inner layer comprises a metal-containing material and the at least one outer layer comprises a composite material~~ further comprising at least one structural component.

18. (currently amended) A bent structural member, comprising:

an inner section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material;

an outer section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material; and

at least one intermediate layer having a honeycomb structure connecting the inner section and the outer section.

19. (original) The structural member of claim 18, further comprising at least one initiator.

20. (original) The structural member of claim 18, further comprising at least one structural component.

21. (currently amended) A method for making a shaped, contoured structural member, comprising:

providing an inner section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material over a shaped mandrel;

roll wrapping at least one intermediate layer over the inner section, the at least one intermediate layer having a ribbed structure;

providing an outer section over the at least one intermediate layer, the outer section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material; and

connecting the inner and outer sections to the at least one intermediate layer.

22. (previously amended) The method of claim 21, including providing the inner section by roll wrapping the inner section over the mandrel.

23. (previously amended) The method of claim 22, including providing the outer section by roll wrapping the outer section over the at least one intermediate layer.

24. (original) The method of claim 23, further including removing the substrate.

25. (original) The method of claim 24, including partially or completely filling the interior created by removing the substrate.

26. (previously amended) The method of claim 25, further including constraining the outer section when connecting the inner and outer sections to the at least one intermediate layer prior to removing the mandrel.

27. (previously amended) The method of claim 26, including constraining the outer section by roll wrapping at least one layer of a shrink-wrap material over the outer section.

28. (original) The method of claim 27, including removing the at least one layer of the shrink-wrap material after the reaction.

29. (previously amended) The method of claim 27, further including providing at least one pressure distributor over the outer section.

30. (original) The method of claim 29, including providing a plurality of layers of shrink-wrap material with the at least one pressure distributor between two of said layers.

31. (currently amended) A method for making a shaped, contoured structural member, comprising:

providing an inner section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material over a substantially straight mandrel;

roll wrapping at least one intermediate layer over the inner section, the at least one intermediate layer having a ribbed structure;

providing an outer section over the at least one intermediate layer, the outer section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material;

removing the mandrel;

modifying the shape of the inner section, at least one intermediate layer, and the outer section to a substantially non-straight shape; and

connecting the inner and outer sections to the at least one intermediate layer.

32. (original) The method of claim 31, including modifying the shape by using an exterior mold and using an internal pressure.

33. (previously amended) The method of claim 31, including modifying the shape and connecting the inner and outer sections to the at least one intermediate layer at substantially the same time.

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34. (currently amended) A method for making a shaped, contoured structural member, comprising:

providing an inner section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material over a shaped mandrel;

roll wrapping at least one intermediate layer over the inner section, the at least one intermediate layer having a ribbed structure;

providing an outer section over the at least one intermediate layer, the outer section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material;

constraining the outer section with a shrink-wrap material;

connecting the inner and outer sections to the at least one intermediate layer; and

removing the shrink-wrap material and the mandrel.

35. (currently amended) A method for making a shaped, contoured structural member, comprising:

providing an inner section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material over a substantially-straight mandrel;

roll wrapping at least one intermediate layer over the inner section, the at least one intermediate layer having a ribbed structure;

providing an outer section over the at least one intermediate layer, the outer section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material;

removing the mandrel;

modifying the shape of the inner section, at least one intermediate layer, and the outer section to a substantially non-straight shape;

constraining the outer section with a shrink-wrap material;

connecting the inner and outer sections to the at least one intermediate layer; and

removing the shrink-wrap material and the mandrel.

36. (currently amended) A shaped, contoured structural member made by the method comprising:

providing an inner section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material over a shaped mandrel;

roll wrapping at least one intermediate layer over the inner section, the at least one intermediate layer having a ribbed structure;

providing an outer section over the at least one intermediate layer, the outer section comprising a continuous plurality of contoured layers comprising a composite material or a metal-containing material; and

connecting the inner and outer sections to the at least one intermediate layer.

37. (currently amended) A shaped, contoured structural member made by the method comprising:

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providing an inner section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material over a substantially straight mandrel;

roll wrapping at least one intermediate layer over the inner section, the at least one intermediate layer having a ribbed structure;

providing an outer section over the at least one intermediate layer, the outer section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material;

removing the mandrel;

modifying the shape of the inner section, at least one intermediate layer, and the outer section to a substantially non-straight shape; and

connecting the inner and outer sections to the at least one intermediate layer.

38. (currently amended) A shaped, contoured structural member made by the method comprising:

providing an inner section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material over a shaped mandrel;



roll wrapping at least one intermediate layer over the inner section, the at least one intermediate layer having a ribbed structure;

providing an outer section over the at least one intermediate layer, the outer section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material;

constraining the outer portion with a shrink-wrap material;

connecting the inner and outer sections to the at least one intermediate layer; and

removing the shrink-wrap material and the mandrel.

39. (currently amended) A shaped, contoured structural member made by the method comprising:

providing an inner section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material over a substantially straight mandrel;

roll wrapping at least one intermediate layer over the inner section, the at least one intermediate layer having a ribbed structure;

providing an outer section over the at least one intermediate layer, the outer section containing a continuous plurality of contoured layers comprising a composite material or a metal-containing material;

removing the mandrel;

modifying the shape of the inner section, at least one intermediate layer, and the outer section to a substantially non-straight shape;

constraining the outer section with a shrink-wrap material;

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connecting the inner and outer sections to the at least one intermediate layer; and  
removing the shrink-wrap material and the substrate.

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